Penguin Popper

Create a fun popper and learn about transfer of energy.

Kit contains:

- 1 cup
- 1 piece of balloon
- several small pom-poms
- 1 piece of orange paper
- 1 piece of white paper
- 2 googly eyes

You will need: scissors and glue.

MORTON GROVE PUBLIC LIBRARY
6140 Lincoln Avenue, Morton Grove, IL 60053
Youth Info Desk: 847-929-5102 | mgpl.org

INSTRUCTIONS

(1) Poke a hole in the bottom of your cup with scissors or a sharp pencil. Then cut out or rip out the bottom of the cup.

(2) Tie a knot in the end of the balloon piece, and then pull it over the bottom of the cup. Tape it in place.

(3) Cut out a small triangle for the penguin's beak and a white oval for the penguin's tummy.

(4) Glue the two shapes and the googly eyes onto your penguin.

(5) Put the pom-poms in the cup, then hold the cup with the opening facing to the side and slightly up.

(6) Pull the knot of the balloon back and let go. The pom-poms will pop out!

Experiment by pulling the balloon knot out very far or just a little bit. How does that change where the pom-poms go?

WHAT'S GOING ON?

Your pom-pom popper is demonstrating **transfer of energy**. First, you have energy in the muscles of your hand and arm and that allows you to pull the balloon knot out. Now your popper has **potential energy** – energy that is waiting to be used. When you let go, you've transferred the energy from your arm/hand to the balloon and then to the pom-poms. It's now **kinetic energy** – energy of movement – and it sends the pom-poms flying in the air! Both potential and kinetic energy are types of **mechanical energy**.

https://www.schooltimesnippets.com/2017/01/paper-cup-penguin-craft.html

FUN FACTS ABOUT PENGUINS!

- There are 18 species of penguins in the world.
- Most penguins live in the Southern Hemisphere.
- Many (but not all!) penguins live where it's very cold. Their feathers and fat layers help keep them warm. They work as a group and huddle close together which also helps them stay warm.

- Penguins are birds that don't fly, but they are very good swimmers!
- You can see penguins in the Chicago area by visiting the Lincoln Park Zoo, the Brookfield Zoo, or the Shedd Aquarium!

BOOKS TO LEARN MORE

- *Energy Makes Things Happen* by Kimberly Brubaker Bradley
- *Experiments with Forces and Motion with Toys and Everyday Stuff* by Emily Sohn